

Course discipline/number/title: WELD 1005: GTAW-Gas Tungsten Arc Welding

A. CATALOG DESCRIPTION

1. Credits: 3
2. Hours/Week: 6
3. Prerequisites (Course discipline/number): WELD 1001
4. Other requirements: None
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: Students will study the fundamentals and safety concerns of the GTAW process. Within this course students will learn about GTAW power sources, shielding gasses, electrode, and filler metal selection. Students will demonstrate the proper PPE and safety concerns needed for the GTAW process. Students will perform basic GTAW welds in all positions and perform visual inspection of these welds to understand what an acceptable weld is.

C. DATE LAST REVISED (Month, year): December, 2020

D. OUTLINE OF MAJOR CONTENT AREAS:

1. GMAW
2. Weld Joints
3. Quality Assurance

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Demonstrate the safe and correct set-up, shutdown, and maintenance of all GTAW related welding equipment.
2. Identify factors that affect proper GTAW electrode, filler metal and shielding gas selection.
3. Perform basic GTAW welds on butt, lap, corner, and T-joints in the flat and horizontal positions.
4. Demonstrate proper inspection of finished welds to determine their compliance to industry standards.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Daily Lab Assignments
2. Final Exam

H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

Personal and Professional Accountability. Students will take responsibility as active learners for achieving their educational and personal goals.

I. SPECIAL INFORMATION (if any): None